

§ 35.10

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will be issued. If a certificate of approval is issued, no test data or detailed results of tests will accompany it. If a notice of disapproval is issued, it will be accompanied by details of the defect(s), with a view to possible correction. MSHA will not disclose, except to the applicant, any information on a fluid upon which a notice of disapproval has been issued.

(b) A certificate of approval will be accompanied by a list of specifications covering the characteristics of a hydraulic fluid upon which the certificate of approval is based. In addition to the applicant's record of control in maintaining the fire-resistant characteristics, applicants shall keep exact duplicates of the specifications that have been submitted to MSHA and that relate to any fluid which has received a certificate of approval; and these are to be adhered to exactly in production of the certified fluid for commercial purposes.

§ 35.10 Approval labels or markings.

(a) A certificate of approval will be accompanied by a photograph of a design for an approval label or marking, which shall bear the emblem of the Mine Safety and Health Administration and shall be inscribed substantially as follows:

PERMISSIBLE FIRE-RESISTANT HYDRAULIC
FLUID

MSHA Approval No. _____
Issued to _____
(Name of Applicant)

(b) A label so inscribed shall be attached to each fluid container in such a manner that it cannot be easily removed or containers may be so marked with a metal stencil. The letters and numbers shall be at least 1/2 inch in height and of a color which contrasts with that of the container.

(c) For a concentrate the label or marking shall clearly indicate that the certification thereof applies only when the concentrate is used in exact conformance with the instructions on such label or marking. The label or marking shall clearly indicate the exact amount of water or other vehicle to make the fire-resistant hydraulic fluid upon which the certificate of approval was based.

(d) Appropriate instructions and caution statements on the handling of the hydraulic fluid or concentrate shall be included on the approval label or marking.

(e) Use of MSHA's approval label or marking obligates the applicant to whom the certificate of approval was granted to maintain the fire-resistant characteristics of the hydraulic fluid and guarantees that it is manufactured according to the specifications upon which the certificate of approval was based. Use of the approval label or marking is not authorized except on containers of hydraulic fluids that conform strictly with the specifications and characteristics upon which the certificate of approval was based.

[Sched. 30, 24 FR 10201, Dec. 17, 1959, as amended at 43 FR 12317, Mar. 24, 1978]

§ 35.11 Material required for record.

MSHA may retain for record all or part of the material submitted for testing. Any material that MSHA does not require will be returned to the applicant at his expense upon receipt of his written request and shipping instructions not more than 6 months after the termination or completion of the tests. Thereafter MSHA will dispose of such surplus material as it deems appropriate.

§ 35.12 Changes after certification.

If an applicant desires to change any specification or characteristic of a certified hydraulic fluid, he shall first obtain MSHA's approval of the change, pursuant to the following procedures:

(a) Application shall be made, as for an original certificate of approval, requesting that the existing certification be extended to cover the proposed change. The application shall be accompanied by specifications and related material(s) as in the case of an original application.

(b) The application and related material(s) will be examined by MSHA to determine whether testing of the modified hydraulic fluid will be required. Testing will be necessary if there is a possibility that the modification may affect adversely the performance characteristics of the fluid. MSHA will inform the applicant in writing whether such testing is required.

(c) If the proposed modification meets the requirements of this part, a formal extension of certification will be issued, accompanied by a list of new and corrected specifications to be added to those already on file, as the basis for the extension of certification.

[Schedule 30, 24 FR 10201, Dec. 17, 1959, as amended at 52 FR 17515, May 8, 1987]

§ 35.13 Withdrawal of certification.

MSHA reserves the right to rescind for cause, at any time, any certificate of approval granted under this part.

Subpart B—Test Requirements

§ 35.20 Autogenous-ignition temperature test.

(a) *Purpose.* The purpose of this test, referred to hereinafter as the ignition-temperature test, is to determine the lowest autogenous-ignition temperature of a hydraulic fluid at atmospheric pressure when using the syringe-injection method.

(b) *Description of apparatus—(1) Test flask.* The test flask, which is heated and into which the test sample is injected, shall be a commercial 200 ml. borosilicate glass Erlenmeyer flask.

(2) *Thermocouples.* Calibrated thermocouples—iron-constantan or chromelalumel—and a potentiometer shall be used for all temperature measurements.

(3) *Syringe.* A hypodermic syringe (0.25 or 1 cc. capacity) equipped with a 2-inch No. 18 stainless steel needle and calibrated in hundredths of a cubic centimeter (0.01 cc.) shall be used to inject samples into the heated test flask.

(4) *Timer.* An electric timer or stopwatch calibrated in not more than 0.2 second intervals shall be used to determine the time lag before ignition.

NOTE: Time lag is the time that elapses between the instant of injection and that of ignition of the test sample, as evidenced by flame.

(5) *Furnace.* The furnace in which the ignition-temperature test is conducted shall consist of a refractory (alundum or equivalent) cylinder 5 inches in internal diameter and 5 inches in height; a transite-ring top and a transite-disk bottom, each of which is attached to a metal cylinder. The furnace is heated by three elements as follows: (i) A cir-

cumferential heater embedded in the refractory cylinder; (ii) a top or toroidal-neck heater that surrounds the neck of the test flask; and (iii) a flat base heater on which the test flask rests. The temperature of each heating element shall be controlled independently by an autotransformer. Means shall be provided for applying thermocouples at the neck, mid-section, and base of the test flask, which shall be inserted upright in the furnace.

(c) *Test procedures—(1) Temperature control.* Each autotransformer shall be so adjusted that the temperature at the neck, mid-section, and base of the test flask is uniform within ± 2 °F. of the desired test temperature.

(2) *Sample injection and timing.* A 0.07 cc. test sample shall be injected into the heated test flask with the hypodermic syringe, and the syringe shall be withdrawn immediately. Measurement of time shall start at the instant the sample is injected.

(3) *Observations.* (i) If flame does not result in 5 minutes or more after injection of the test sample, the sample shall be considered nonflammable at the test temperature, and the timer shall be stopped. The test flask shall then be flushed well with clean dry air and, after a lapse of 15 minutes or more, the test shall be repeated with the test flask temperature raised 50 °F. ± 2 °F. above the first test temperature.

(ii) If ignition (flame) is observed in 5 minutes or less after the injection of the test sample (0.07 cc.), the time lag (time interval) shall be noted. After an ignition occurs the temperature of the test flask shall be reduced 5 °F., and the test procedure repeated in decrements of 5 °F. until ignition no longer occurs and this temperature shall be noted as the first nonignition test temperature for the 0.07 cc. sample.

(iii) The temperature shall be increased 50 °F. ± 2 °F. above the first nonignition test temperature, and the ignition-temperature test procedure shall be repeated with a 0.10 cc. test sample injected into the heated test flask.

(iv) If the lowest temperature at which ignition occurs with the 0.10 cc. sample (in decrements of 5 °F.) is lower